

with a few hair-like bristles. Fore femur with a bristle at middle on anterior surface and one at apex on postero-ventral, the ventral surface with fine short hairs; hind femur with one long fine hair at base on ventral surface and a few widely spaced similar hairs on ventral surfaces which are much longer than the other hairs; hind tibia with three anterodorsal and three posterodorsal bristles; apical ventral bristle on hind tibia stout and slightly curved. First vein bristled on apical half; outer cross-vein at about half its own length from apex of fifth.

Length, 5-5.5 mm.

Type, male, No. 1584, Hood River, Oregon, June 21, 1917 (F. R. Cole), Allotype, female, No. 1585, Bovil, Idaho, July 15, 1910 (J. M. Aldrich). Paratypes, one male, Keyport, Washington, August 7, 1905 (J. M. Aldrich); one female, Delaware Water Gap, Pennsylvania (C. W. Johnson).

The genotype, *pallida* Zetterstedt, differs from this species in having the dorsum of thorax with four confluent blackish vittæ, and the postnotum blackish. The entire series of four specimens of *americana* differs in having the thorax entirely yellow and can hardly belong to a variety of *pallida*.

The only other northern species of the genus, *unilineata* Zetterstedt, has been recorded from Alaska. I have not seen it, but it has four scutellar bristles, and the apex of first vein bare, besides differing in other characters.

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## STUDIES IN THE MELYRIDÆ (Coleoptera)

### III.

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With the exception of the *Listrus* collected by Mr. Fox, the species described below have been non-descript in our collections for many years. It is quite amazing the way new species of Melyrids are being discovered. The automobile is in part the cause of this, as collectors can now go to the outlying districts, which were too far away or inaccessible before the completion of the highways. The author has at hand fully a half as many more unnamed species as have been described.

The following descriptions of new species and of one new genus are submitted at the present time.

#### *Pristoscelis vandykei* Blaisdell, new species

Form dissimilar in the sexes. Color black; antennæ rufous, distal joints rufo- or nigro-piceous; mouth-parts rufo-piceous and the legs rufo-testaceous; elytra more or less tinged with rufous at apex; abdomen more or less rufous in the female.

Pubescence evenly distributed, moderately dense but not entirely hiding the surface, conspicuous, cinereous in color; uniform and mod-

erate in length and not intermixed with erect hairs or setæ, recumbent. Fimbriæ pale, those of the pronotal margins not closely placed and of moderate length, the elytral longer anteriorly. Surface in both sexes very finely reticulate and rather dull in luster. Punctures distinct, rather small, not very sharply defined and separated by a distance equal to three or four times their diameter.

Male. Elongate oblong, not in the least narrowed anteriorly, about three times as long as wide and less than moderately convex, somewhat depressed. Head large, about as wide as the pronotum, as long as wide, subtriangular; eyes large and moderately convex; the tempora equal in length to and continuing the surface line of the eyes, feebly convex and moderately converging posteriorly. Front plane, very feebly and broadly impressed; apical margin truncate, well defined; epistoma absent; post-labral area membranous and pale in color; labrum transverse, chitinous, feebly arcuate at apex; mandibles not prominent. Antennæ quite heavy, subserrate and extending to about middle of pronotal disk.

Pronotum about a fourth wider than long; a little narrower than the elytra; sides moderately arcuate, apex truncate in moderate circular arc, the base broadly arcuate; angles rounded, continuing the curve of the sides, apex and base; disk moderately and evenly convex from side to side. Elytra oblong, parallel, less than twice as long as wide; base truncate, humeri distinct and rather narrowly rounded, feebly tumid; apex broadly rounded. Abdomen moderately convex, segments subequal in length, very finely and rather densely punctate; pubescence fine, longer, not dense and recumbent; fifth ventral segment distinctly truncate at apex. Legs moderate in length and stoutness; metafemora not stouter than the mesofemora, straight; tarsi rather stout.

Female. Similar to the male except less oblong in form and head and pronotum notably smaller. Head about equal to the width of the pronotal apex; tempora short; eyes not distant from the pronotal apex; post-labral membranous area very short and transverse and less sharply defined from the frontal apex. Antennæ shorter and less robust. Pronotum smaller, not as wide as the elytra. Abdomen moderately convex; fifth ventral broadly and not strongly rounded. Legs somewhat shorter, rather less stout, tarsi noticeably so.

Length (types) 3.4-3.5 mm.; width 1.4 mm.

Holotype, male, and allotype, female, in the author's collection. Collected by Dr. E. C. Van Dyke, in September, 1900, at Irvington, Alameda County, California. Paratypes in the collections of the author and of Dr. Van Dyke.

The present species has not been taken in recent years. Two males and three females have been studied. In *Pristoscelis* the epistoma is said to be absent; the apical margin of the front is well defined from the post-labral membranous area. These characters are quite similar in both *grandiceps* and *vandykei*. The two species differ markedly in facies, coloration and pubescence, but not to any greater extent than do the extreme forms in *Trichochrous*. *Vandykei* is a most interesting addition to the Melyridæ.

**Eutricholistra** Blaisdell, new genus

Pubescent; epistoma membranous at apex and not defined from the front by a frontal suture. Eyes large as in *Trichochrous*, sparsely setose. Antennæ as in *Trichochrous*. Head and pronotum very coarsely punctate. Lateral pronotal margins not serrulate. Epipleura more or less outwardly reflexed in plane, wider toward base as in *Trichochrous*. Apex of the fifth ventral abdominal segment as in *Trichochrous*. Anterior tibiæ beset externally with short spinules. Ungual appendages about two-thirds as long as the claw, mutually equal and attached nearly their entire length.

The following is a synoptic statement of the genera most closely related to *Eutricholistra*:

Epipleura distinct.....	1
Epistoma distinct.....	1
Epistoma absent, the frontal margin more or less finely beaded throughout the width. Ungual appendages as long as the claws and subequal, but the inner is detached from claw through outer third of its length.....	<i>Pristoscelis</i> .
1. Lateral pronotal margins not serrulate.....	2
Lateral margins serrulate.....	4
2. Epipleura narrow, wider toward base, more or less strongly, outwardly reflexed in plane throughout their length.....	3
Epipleura broad and horizontal, more or less inwardly reflexed in plane toward apex.....	5
3. Antennæ long, strongly serrate and clothed with long sparse and flexible hairs.....	<i>Sydatopsis</i> .
Antennæ short and not pilose.....	6
4. Prothorax dilated posteriorly, minutely serrulate at the sides, with a close-set fringe of usually pale hairs; anterior tibiæ without stout spinules externally.....	<i>Listrus</i> .
Prothorax widest at middle; side margins strongly serrate, especially anteriorly, without close-set fringe; anterior tibiæ with stout spinules externally.....	<i>Cradytes</i> .
5. Apical angles of the pronotum anteriorly prominent.....	<i>Eudasytes</i> .
Apical angles not prominent.....	<i>Asydates</i> .
6. Epistoma short, membranous and pale; unguinal appendages about two-thirds as long as the claws.....	<i>Eutricholistra</i> .
Epistoma longer, chitinous and dark; unguinal appendages as long as the claws.....	<i>Trichochrous</i> .

**Eutricholistra punctata** Blaisdell, new species

Form elongate oblong-oval, moderately convex. Color black; antennæ, mouth-parts, tibiæ and tarsi more or less piceous; epistoma and apical margin of labrum, pale; knees slightly rufous. Pubescence abundant, not dense, rather conspicuous, somewhat coarse and more or less recumbent, moderately long, uniform in distribution and length—in color flavo-cinereous. Hairs apparently recumbent on head and pronotum. Fimbriæ pale, those of the lateral pronotal margins forming a moderately long, close-set fringe, those of the elytra less coarse, longest toward base. Hairs blackish on and about the genital segments.

Head relatively small, about equal in width to the pronotal apex, about as long as wide, subtriangular, muzzle moderately short. Front feebly convex between the eyes; rather broadly impressed toward the epistoma, with a small impunctate area at middle of apex; finely margined against

the eyes; sparsely punctate, punctures large and coarse, slightly denser along the eyes and apical margin. Eyes large, round and moderately strongly convex, facets sharply defined and moderate in size. Antennæ rather short, extending to about the middle of the pronotum, somewhat stout and slightly compressed, not strongly serrate. Terminal joint of the maxillary palpi stouter and more widely truncate at apex than in *Listrus* or *Trichochrous*.

Pronotum about a third wider than long; apex truncate in middle two-fourths; base broadly arcuate; sides slightly converging anteriorly, angles almost continuously rounded with the sides, base and apex; disk rather strongly and evenly convex from side to side; punctures coarse and strong, separated by a distance equal to one to three times their diameter, interstitial surface glabrous throughout. Elytra oblong, moderately convex, about twice as long as wide; base broadly and slightly emarginate; humeri not prominent, slightly tumid and moderately rounded; punctures less coarse than on the head and pronotum, separated by a distance equal to about two times their diameter; surface obsoletely rugose toward apex, the latter rather broadly rounded; sutural angles obtuse. Abdomen moderately convex, somewhat densely punctate at sides of the segments, rather more coarsely so toward apex. Legs moderate in length and stoutness.

Male. Narrower, parallel; pronotum about as wide as the elytra; fifth ventral abdominal segment truncate at apex in middle two-fourths, slightly flattened on disk. Female. Broader, sides slightly arcuate; head smaller, the antennæ shorter and less stout; pronotum somewhat smaller; fifth ventral segment longer and rounded at apex, margin set with blackish hairs.

Length (types) 3-3.5 mm.; width 1-1.4 mm.

Holotype, male; allotype, female, and paratypes in the author's collection. Collected by Mr. F. W. Nunenmacher at Nogales, Arizona, September 14, 1906.

*Eutricholistra* should follow *Pristoscelis* in our lists. It has the appearance of a *Trichochrous*, but can readily be recognized by its unusually coarse punctuation of the head and pronotum.

#### *Listrus minutus* Blaisdell, new species

Size small. Form elongate oval, about three times as long as wide. Color nigro-piceous to black, with antennæ, tibiæ and tarsi piceous. Pubescence very short, very sparse and inconspicuous, slightly fulvous in color; fimbriæ extremely short and inconspicuous; without maculation.

Head as wide as the pronotal apex, about as wide as long, muzzle very short. Front slightly and rather evenly convex, surface very finely wrinkled, punctures not evident. Eyes relatively large and strongly convex. Antennæ extending nearly to pronotal base, gradually incrassate; joints two, six and seven subglobular, sixth smallest; third and fourth about as wide as long, feebly obconical; fifth subtriangular, larger than the contiguous joints; eighth slightly transverse, short; ninth and tenth larger and about as wide as long; eleventh pointed oval, nearly as long as the preceding two taken together. Pronotum about as long as wide, base and apex subtruncate in middle three-fifths; sides rather evenly arcuate, angles rounded, the basal sometimes slightly evident; marginal serrulations very minute and subobsolete; disk quite strongly convex

from side to side, rather finely and not closely punctate; interstitial surface very finely reticulate, gradually becoming reticulo-asperate in about lateral fifth.

Elytra less than three times as long as the pronotum; sides slightly arcuate, subparallel; base feebly emarginate; sutural angles obtuse and each almost rounded; disk more coarsely punctate than the pronotum; punctures separated by a distance equal to one and one-half times their diameter; moderately convex, surface extremely finely reticulo-subasperate. Scutellum small and concolorous. Abdomen very finely punctulate; pubescence fine, sparse and inconspicuous. Legs moderate in length and stoutness.

Male. Narrower and more parallel; fifth ventral segment truncate at apex. Female. Broader, sides more arcuate; antennæ slightly more slender; fifth ventral rounded at apex, but not broadly so.

Lengths (types) 1.9-2.1 mm.; width .6-.8 mm.

Holotype, male, No. 1586, and allotype, female, No. 1587, Museum California Academy of Sciences, collected May 16, 1915, by the author, at Crystal Lakes, San Mateo County, California. Paratypes in the collections of the Philadelphia Academy of Sciences, that of Charles Liebeck of Philadelphia and in that of the author. Forty specimens studied.

*Minutus* is the smallest described *Listrus*, it is related to *obscurellus* Lec. from which it differs in the shorter and more inconspicuous pubescence, smaller size, and in being less elongate. In *obscurellus* the antennæ are more elongate and the basal joints longer and more obconical. *Punctatus* Mots. is more robust, oblong-oval and less convex, pubescence and firmbræ longer. The parapleura are clothed with whitish hairs in all the three species. *Minutus* was obtained by sweeping buttercups (*Ranunculus californicus*) in the open fields on hill sides.

#### *Listrus foxi* Blaisdell, new species

Form elongate, about three times as long as wide. Color black, with a very feeble bluish tinge; tibiæ, tarsi and antennæ more or less piceous. Pubescence dense, short and cinereous. Maculation sharply defined and arranged as follows: a parascutellar spot on each elytron, which may coalesce around the scutellum and so form an oblong spot; a short elongate humeral spot; subbasal fascia represented by a spot at center of each elytron; a submedian transverse fascia that scarcely attains the margin or suture, its edges feebly irregular; a subapical transverse row of four spots and an apical spot. Pronotal macules as follows: a central oblong spot divided into four, two anterior and smaller, two posterior and larger; the lateral vitta broken into two macules. Lateral pronotal and elytral firmbræ well developed, moderate in length, shorter on the elytra; cinereous in color. Pubescence longer beneath.

Head slightly transverse, a little wider than the pronotal apex, muzzle short; front broadly impressed and with a slight convexity against the middle of the clypeal base; punctures rather large, shallow and separated. Eyes large and convex. Antennæ rather elongate, feebly incrassate; joints two to eight rather elongate and slightly compressed; second

oval; third subcylindrically obconical; fourth subtriangular; fifth more broadly triangular and distinctly longer than wide; sixth to eighth about as wide as long and subequal in size; ninth and tenth slightly more robust, scarcely longer than wide; eleventh pointed oval and about a half longer than wide. Pronotum slightly transverse; apex truncate in feeble circular arc; base broadly arcuate, feebly and briefly sinuate laterally within the angles; apical angles rounded, the basal small like a serrule; sides rather evenly arcuate, very feebly convergent anteriorly; serrulations subacute and well defined; disk moderately convex from side to side, punctures rather large, well defined and separated by a distance equal to their diameter, intervening surface flat in the central area and with few scattered punctules, becoming reticulo-indentate laterally.

Elytra oblong-oval, base emarginate and adapted to the pronotal arcuation; disk moderately convex; punctures moderately small, becoming more widely separated and smaller apically, where the surface is smooth and not ruguloso-punctate as toward base. Abdomen finely punctate. Legs moderately stout.

Male. Parallel; posterior femora distinctly arcuate and rather tumid; fifth ventral segment modified, in the central area, and there clothed with black hairs as well as on the genital segments, apex sinuato-truncate, adjacent surface asperate. Female. Broader, sides more arcuate; posterior femora straight and not tumid; fifth ventral moderately broadly rounded at apex, somewhat deflexed; surface just before apex along margin black and asperate.

Length (types) 3.5-3.9 mm.; width 1-1.3 mm.

Type, male, No. 1588, and allotype, female, No. 1589, Museum California Academy of Sciences, collected July 12, 1919, by Mr. Charles L. Fox, after whom the species is named. Paratypes in the collection of the author and that of Mr. Charles Liebeck of Philadelphia.

Type locality, Longmire Springs, Washington.

*Foxi* resembles *maculosus* Casey, but differs from that species by the modified fifth ventral in the male. It should follow *canescens* in the author's table.

#### ***Listrus anacapensis* Blaisdell, new species**

Form elongate oval, moderately convex. Color black, superior surface with a distinct æneous luster. Antennæ piceous, more or less rufous in basal portion; legs piceous, tibiæ sometimes rufo-piceous. Pubescence conspicuous, abundant, not completely hiding the general surface, recumbent, somewhat short and plumbeo-cinereous in color; distinctly hair-like on head and pronotum, coarser on the elytra. Elytral maculation not sharply defined, somewhat obscure; a small humeral and a larger parascutellar macule at base on each elytron; post-basal fascia, narrow and zigzag; post-median fascia wider and similar; subapical fascia and macules more or less indefinite; pronotal median vitta almost obscurely divided into four macules, the anterior being smaller; lateral vittæ more or less discernable as two spots each; central area of the head darker. Lateral pronotal fimbriæ rather short, those of the elytra still shorter, not longer anteriorly. Hairs of the abdomen finer than on the superior surface.

Head slightly wider than long, subtriangular, muzzle short. Front plane or very feebly and broadly impressed, not densely punctate; punctures rather small, well defined and separated by a distance equal to one or two times their diameter, denser on the vertex. Eyes moderately large and evenly convex. Antennæ extending to about the basal fourth of the pronotum, subclavate, moderately slender basally; second joint oval, scarcely longer than wide; third subcylindrically obconical, about twice as long as wide; fourth a little broader at apex and about equal to the third in length; fifth a little broader than the contiguous joints, subtriangular and a little longer than wide; sixth, seventh and eighth about as long as wide at apex, shorter than the preceding joints; ninth, tenth and eleventh larger and more robust, similar in form to the eighth; eleventh short obovate and obtusely pointed at apex.

Pronotum slightly different in proportions in the sexes; apex and base arcuate; widest at basal third; angles broadly rounded; sides moderately arcuate in basal half, less so anteriorly, serrulations quite feeble; disk rather strongly and evenly convex from side to side, quite densely punctate; punctures moderately small, distinct and in the central area separated by a distance equal to their diameter, becoming denser, and reticulato-punctate in lateral third; interstices in the central area flat and apparently not indented. Elytra oblong oval, base subtruncate; scutellum quadrate; humeri not prominent or tumid, moderately narrowly rounded; apex rather parabolically rounded; surface vaguely subrugose; punctures larger than on the pronotum and somewhat impressed, separated by a distance equal to two or three times their diameter. Abdomen finely and rather densely punctate. Legs somewhat long, metafemora not noticeably swollen and nearly straight; tarsi slender and elongate.

Male. Narrower, parallel, sides feebly arcuate; pronotum a little longer than wide, sides noticeably straight and convergent in apical half; fifth ventral abdominal segment truncate at apex. Female. Broader, widest behind the middle, sides moderately arcuate; pronotum about as wide as long, less convergent anteriorly, sides more arcuate; fifth ventral segment longer and rounded at apex.

Length (types) 2.6-3.1 mm.; width .9-1.1 mm.

Type, male, No. 1590, and allotype, female, No. 1591, in the Museum of California Academy of Sciences. Paratypes in the collection of the Academy and that of the author.

Type locality, Anacapa Island, California. Collected on May 15, 1919, by E. P. Van Duzee. A small series studied.

*Anacapensis* is most closely related to *variegatus* Casey, from which it differs in its more elongate form and less developed maculation. Both sexes are more noticeably narrowed anteriorly. In a female *variegatus* kindly identified for me by Colonel Casey, the pronotal punctuation in the central area is sparser, the lateral pronotal and elytral fimbriæ are quite equal in length, the scutellum is wider than long, the male is stouter and the head and pronotum relatively broader as compared to the elytra. The pubescence and maculation resembles some of the extreme forms of *confusus* Casey.